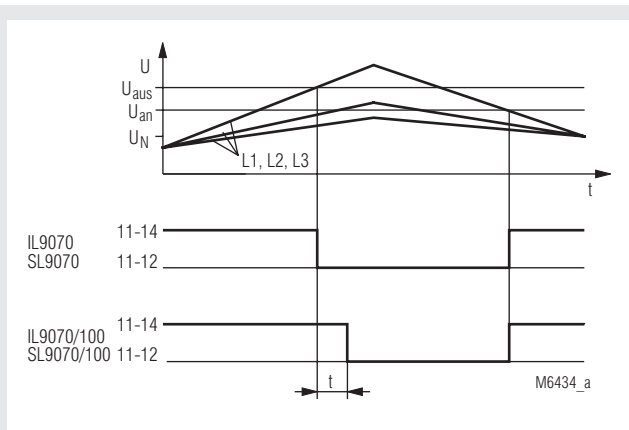


VARIMETER Overvoltage Relay IL 9070, SL 9070



- According to IEC/EN 60 255, DIN VDE 0435-303
- Identification of overvoltage in three-phase voltage systems
- With asymmetry identification (even with feed back voltage) as an option
- Single-phase connection possible
- Variable setting value
- Fixed time delay as an option
- Closed circuit operation
- LED display
- Independent of phase sequence
- Optionally for 3P3W Systems
- 2 changeover contacts
- **Devices available in 2 enclosure versions:**
 - IL 9070:** depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
 - SL 9070:** depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- Width 35 mm

Function Diagram



Approvals and Marking



Application

Monitoring of single- and three-phase voltage systems to identify overvoltage and asymmetry.

Indicators

LED on green: output relay activated
LED on red: overvoltage / asymmetry

Technical Data

Input

Nominal voltage U_N : 3 AC 100, 400 V
3/N AC 100 / 58, 400 / 230 V
other voltages on request

Voltage range: 0.7 ... 1.3 U_N

Maximum overload: 1.35 U_N , permanent

Nominal consumption: approx. 8 VA (L3-N)

Nominal frequency: 50 / 60 Hz

Input resistance: approx. 180 k Ω (L1-N, L2-N)

Setting Ranges

Setting value U_{off} : 0.9 ... 1.3 U_N

Hysteresis: approx. 4 %

Asymmetry identification
IL 9070/010, SL 9070/010: approx. 6 ... 8 % phase asymmetry

Delay time
IL 9070/100, SL 9070/100: 0.5 or 1 s, fixed

Output

Contacts

IL 9070.12, SL 9070.12: 2 changeover contacts

Thermal current I_{th} : 4 A

Switching capacity
to AC 15

NO contact: 3 A / AC 230 V IEC/EN 60 947-5-1

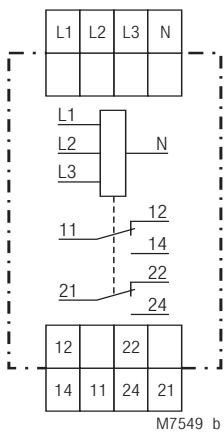
NC contact: 2 A / AC 230 V IEC/EN 60 947-5-1

Electrical life
to AC 15 at 1 A, AC 230 V: 5 x 10⁵ switching cycles

Short circuit strength
max. fuse rating: 4 A gL IEC/EN 60 947-5-1

Mechanical life: 30 x 10⁶ switching cycles

Circuit Diagram



IL 9070.12, SL 9070.12

Technical Data

General Data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
rated impuls voltage / pollution degree:	4 kV / 2	IEC 60 664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation:	10 V / m	IEC/EN 61 000-4-3
Fast transients:	4 kV	IEC/EN 61 000-4-4
Surge voltages between wires for power supply:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	2 kV	IEC/EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0.35 mm, frequency 10 ... 55 Hz, IEC/EN 60 068-2-6	
Climate resistance:	20 / 060 / 04 IEC/EN 60 068-1	
Terminal designation:	EN 50 005	
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
Mounting:	DIN rail IEC/EN 60 715	
Weight		
IL 9070:	110 g	
SL 9070:	137 g	

Dimensions

Width x height x depth

IL 9070:	35 x 90 x 59 mm
SL 9070:	35 x 90 x 98 mm

Standard Types

IL 9070.12 3/N AC 400 / 230 V

Article number:	0045810
• Output:	2 changeover contacts
• Nominal voltage U_N :	3/N AC 400 / 230 V
• Width:	35 mm

SL 9070.12 3/N AC 400 / 230 V

Article number:	0054756
• Output:	2 changeover contacts
• Nominal voltage U_N :	3/N AC 400 / 230 V
• Width:	35 mm

Variants

IL 9070/001:	for 3P3W systems
IL 9070/010:	with asymmetry identification, even when there is feed back voltage
IL 9070/100:	with a fixed delay time

Ordering example for variants

IL 9070	.12	/100	3/N AC 400 V / 230 V	50/60 Hz	1 s				
						Time delay	Nominal frequency	Nominal voltage	Variant, if required
									Contacts
									Type